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May 16, 1996

HAND DELIVER

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, DC 20554

DOCKET FILE COPY ORIGINAL

Dear Mr. Caton:

On behalf of Capital Cities/ABC, Inc., transmitted herewith for filing with the Commission are an original and five copies of its Reply Comments in ET Docket No. 95-177.

If there are any questions in connection with the foregoing, please contact the undersigned.

Sincerely,

Dvora Wolff Rabino

Dvora Wolff Rabino

DWR/ak
Enclosures

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of Part 15 of the	)	
Commission's Rules to Permit	)	ET Docket No. 95-177
Operation of Biomedical	)	
Telemetry Devices on VHF TV	)	
Channels 7-13 and on the	)	
UHF TV Channels	)	

REPLY COMMENTS OF CAPITAL CITIES/ABC, INC.

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To: The Commission

REPLY COMMENTS OF CAPITAL CITIES/ABC, INC.

Capital Cities/ABC ("CC/ABC") hereby submits its reply comments in response to the Commission's Notice of Proposed Rulemaking ("Notice") in the above-captioned proceeding.

We share the opinion expressed by the Commission and several commenting parties that improving biomedical telemetry communications would be in the public interest. Unfortunately, the proposals put forth in the Notice are not a sound means to that end. Those proposals are most likely to cause more interference to both broadcast users of the spectrum and to users of medical telemetry devices

I. CCTG's Engineering Conclusions Concerning Protection to the Television Broadcast Service Are Not Persuasive

As the Association for Maximum Service Television, Inc. ("MSTV") argues persuasively in its comments, interference tests based on standard NTSC transmissions are of little utility in predicting interference between television stations and telemetry devices. (MSTV Comments at 3.) That is because the modulation characteristics of telemetry devices do not resemble those of standard NTSC transmissions, and even vary based on manufacturer and type of device. (Id.) Accordingly, we agree with MSTV that the engineering data submitted in support of CCTG's petition do not begin to make the case for interference-free operation at the vastly increased power levels proposed. (Id. at 3-4.)

Similarly, we agree with the National Association of Broadcasters that the impact of medical telemetry devices on television reception depends very much on the devices' precise spectral location within the NTSC television channel. CCTG has not provided engineering data showing the differing impact as the devices' positioning varies. Moreover, the effects of the devices on digital TV signals will be yet another case. (NAB Comments at 9-10.) More technical information is certainly needed before CCTG's proposals can be thoroughly evaluated.

As a general matter, at this time it is difficult to predict what the impact of biomedical telemetry devices will be on the reception of digital television signals, which respond to propagation anomalies in a manner quite different from NTSC transmissions. The Commission is in the midst of a major

proceeding on ATV that will result in assigning new digital channels to incumbent broadcasters. The Commission should therefore defer any consideration of CCTG's proposals until data are available on the impact of those devices on the reception of digital television signals.

II. The Proposals Are Unlikely to Enhance Biomedical Telemetry Service

The case has not been made that operation at increased power on the VHF and UHF bands would secure for medical telemetry users the higher quality communications they seek. We agree with MSTV that even at the increased power levels, interference is still likely to be received by medical telemetry users. (MSTV Comments at 4-5.) As MSTV argues, CCTG has overstated the attenuation factors resulting from the presence of hospital walls -- particularly if nursing homes and other residential-type facilities are added to the list of eligible users.

At least one medical user appears to recognize that CCTG's proposals may not decrease interference for medical telemetry users because of interference from other medical telemetry devices. Texas Children's Hospital, in its comments, expresses concern that the proposals "will, unless manufacturers provide narrow banded active antenna devices, increase [the] potential for desensitization by Radio Frequency (RF) signals present in these frequency bands." (Comments at 1.)

Other medical commenters that endorse CCTG's proposals have done so without performing any critical analyses of CCTG's assumption that its proposals will result in interference-free operation. The Association for the Advancement of Medical Instrumentation ("AAMI"), for example, claims to support CCTG's proposals in the interest of "establish[ing] clear radio channels for ECG telemetry monitoring" and creating "an interference-free environment for medical devices in general." (Comments at 1.) Similarly, the Department of Biomedical Engineering for the City and County of San Francisco submitted comments supporting "[g]reater availability of interference free biomedical channels" in order to "reduce service calls related to interference." (Comments at 1.) The American College of Cardiology, in its comments, characterizes the Notice as proposing "to establish clear channels for ECG telemetry monitoring." (Comments at 1.) CCTG's proposals would not, however, secure the interference-free operation sought by such parties. To achieve that goal, the best solution would be dedicated spectrum for the operation of biomedical telemetry devices outside of the television broadcast bands. Like MSTV, we believe that such a solution would be far preferable to the one advanced in the Notice. (MSTV Comments at 5.) Since the instant proposals are unlikely to meet the needs of medical users, they should be replaced by a proposal that will.[1]

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[1] It is noteworthy that researchers at the Mayo Clinic and Wireless Technology Research (WTR) recently warned people dependent on pacemakers not to use digital wireless telephones because interference from the phones has been found to cause abnormal functioning in pacemakers. See Communications Daily (May 14,

III. Because Medical Telemetry Services are Unlicensed, CCTG's Proposals Would Decrease User Accountability to an Unacceptable Level

In certain respects, medical telemetry users seem to want the advantages that flow from being licensed operators without having to take on the corresponding responsibilities. For example, CCTG, in its comments, asserts that broadcast or motion picture users of low power auxiliary radio stations ("LPAS") could coordinate with nearby health care facilities to avoid causing or receiving interference. We fail to see, however, why licensed, fee-paying Part 74 broadcast auxiliary licensees should be required to take on the responsibility and additional cost of coordinating with unlicensed Part 15 operators. Such Part 74 users already have a workable system of recognized frequency coordinators. Moreover, if health care facilities, in addition to hospitals, were entitled to use medical telemetry devices at higher power on the broadcast bands, the difficulty of coordination would only be increased. There is no reason to think that a central registry of the type built up over years by the broadcast industry would spring into existence listing all health care facilities and hospitals in a given area making use of medical telemetry devices. Such a registry would require a significant investment of time and other resources, which should be supplied by the medical telemetry users, not broadcasters.

1996), at 4. The Commission should avoid setting up a similar potentially harmful situation involving patient monitoring devices, especially since the top of UHF-TV spectrum is adjacent to cellular telephone spectrum.

Similarly, we share the skepticism expressed by other parties concerning the idea that "trained service personnel" could be relied upon to monitor installation and operation of medical telemetry devices to minimize interference. (See, for example, the Comments of the Society of Broadcast Engineers, at 4-5.) Our experience with the wireless microphone industry is like that described by KUED in its comments: "the operators in general are ignorant of the interference potential with television." (KUED Comments at 1.) Our experience with some vendors is even worse: some simply do not care about the consequences of their sales or installations, and others have actively attempted to mislead customers. The same uneven adherence to rules and requirements may reasonably be expected from providers and operators in the medical telemetry field, especially given their unlicensed status.

IV. Since There Are Better Alternatives to the Sharing Proposed in the Notice, the Commission Should Reject CCTG's Proposals

Several parties have proposed alternatives to the spectrum-sharing at increased power proposed by CCTG that offer clearer reception for medical telemetry users and do not threaten over-the-air television reception.

First, there is the possibility of spectrum dedicated to medical telemetry users. (MSTV Comments at 5.) KUED mentions the spectrum at 2390-2400 MHz, 2402-2417 MHz and 4660-4685 MHz, which was set aside for "better health care through wireless health care monitoring devices" (KUED Comments at 2).

Second, there is the possibility of sharing of the VHF band, and some sharing of the UHF band, at somewhat higher power, with greater cochannel distance separations than those proposed and with licensed operation, which would require prior frequency coordination by the medical telemetry user through the existing Broadcast Auxiliary Frequency Coordinator network. (NAB Comments at 6.)

Third, we wish to mention the spectrum at 1910-1930 MHz set aside in 1994 for unlicensed data personal computer services. (See Amendment of the Commission's Rules to Establish New Personal Communications Services, Gen. Docket No. 90-314, June 9, 1994.) If medical users require unlicensed yet protected transmission of data, they would be better accommodated in this spectrum than secondary to television broadcasting.

Conclusion

Like many other parties that have commented in this proceeding, Capital Cities/ABC is seriously concerned about the likelihood of increased interference to broadcast and broadcast auxiliary operations if the proposals in the Notice are adopted. We urge the Commission to reject the proposals because they are likely to cause more interference to both broadcast users of the spectrum and to users of medical telemetry devices.

Respectfully submitted,

By: Dvora Wolff Rabino

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May 16, 1996

CERTIFICATE OF SERVICE

I, Anne Kromm, hereby certify that on this 15th day of May, 1996, I caused a copy of the foregoing "Reply Comments of Capital Cities/ABC, Inc." to be served by first-class United States mail, postage prepaid to:

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